

Greensboro Foam Recycling Project Business Plan

A Cooperative Venture Among:

Greensboro Beautiful, Incorporated
Environmental Stewardship Greensboro
Tiny House Community Development, Inc.
Emerging Ecology

With grant funding support from the
Foodservice Packaging Institute



Greensboro Foam Recycling Business Plan

Project Description

Partners from Greensboro non-profits and faith congregations are mobilizing to establish a local drop-off site and densification processing facility in Greensboro in an effort to recycle foam products that would otherwise go with household trash into a landfill.

Partners in this innovative program include:

- Greensboro Beautiful, Inc. (GBI), a nonprofit, 501(c)(3) volunteer organization, which partners with the City of Greensboro and citizens of Greensboro to conserve and enhance the beauty and ecology of our community. GBI combines City of Greensboro paid full-time staff with private funding and support of individuals and corporations, civic and youth groups, foundations, faith communities and families to initiate community enhancement projects and programs.
- Environmental Stewardship Greensboro (ESG), an interfaith volunteer coalition, encourages sustainable practices within faith communities and among residents of Guilford County.
- Tiny House Community Development (THCD), a 501(c)(3) nonprofit organization, works to develop tiny house communities in Guilford County with the intent to create safe, permanent, and affordable housing for those experiencing homelessness.
- Emerging Ecology, a 501(c)(3) nonprofit organization, that promotes mutually enhancing relationships between people and Planet. Emerging Ecology will serve as the financial agent and provide a web portal and accounting system for donations during the fundraising phase of the project.

Project Location

The proposed foam recycling site will be located at the Tiny House Community Development Training and Recycling Center, 1310 W. Gate City Boulevard. The site will be equipped with a densifier and operated by Tiny House staff and trained volunteers. Publicly available collection containers will be available at the rear of the Tiny House facility. These will be easily accessible 24/7.



Equipment

The drop-off site will be equipped with a RecycleTech densifier (model XT200-E – photo at right), which will be housed inside the THCD building. Two large steel recycling containers, purchased from Recyclingbin.com in Washington, NC, will be located outside the building, convenient for residents to leave foam material at the site.



Rationale

Since the City does not accept foam for recycling, ESG members in over a dozen congregations have collected foam packaging at their congregations for delivery to the Dart Container facility in Randleman, NC. In the past ten years, ESG members have delivered over 1,000 carloads of material to Dart. Over the last 11 months, one congregation has made over eighty 44-mile round trips to Dart to deliver full car/truck loads in order to keep this material from the landfill. In recent years several congregations have been overwhelmed by the volume of foam dropped off by people who see the value of recycling foam rather than sending it to a landfill.

Like nearly every municipality, Greensboro's recycling program is under tremendous stress and cannot add foam material to its recycling system. City solid waste officials, however, support our partnership's efforts to develop a local drop-off foam recycling program. Research into foam recycling efforts around the country revealed a large pent-up demand on the part of environmentally sensitive residents and businesses for removing foam products from the waste stream.

Although the City of Greensboro does not accept foam products for recycling, it is estimated that 1% of the weight in the City's solid waste stream consists of foam packaging material. However, the volume of foam products is highly disproportionate to their weight. While the cost to the City of solid waste disposal is based on weight, the long-term effect at the landfill is based on volume. Estimates vary on the rate at which landfills are reaching their capacity; however, permitting new landfill sites is increasingly difficult as regulations change and environmental awareness arises. Once in the landfill, foam does not decompose quickly, lasting around 500 years. Thus, providing local access to densification

services becomes ever more important. Recycling foam products extends the life of current landfills.

Very few municipalities include foam in their recycling programs, but those who have initiated drop-off sites have found reliable markets for densified foam that generate income. By the end of the three-year term of the partners' \$22,000 grant from the Foam Recycling Coalition, it is anticipated that the drop-off site will demonstrate to city staff and City Council the feasibility of a foam recycling program.

Material Targeted for Recycling

Initially we plan to accept all foam packaging materials, including food service containers and trays, from residents, hospitals, colleges, and businesses in Guilford County. City staff will help promote the drop-off location on the city's website, on-line newsletters, and utility flyers. Specific outreach efforts will target senior communities, pharmacies, hospitals, florists, big-box electronics retailers, and local college labs and cafeterias.

From experience with congregation-based foam efforts, when people learn about places to drop off foam material through word-of-mouth, large quantities are left at congregation buildings.



The drop-off site will have one bin (photo left) for food service material and another bin for packaging items. This will allow for separating cleaner material from food service items to maximize the value of densified foam and minimize contamination. It is expected that Tiny House staff will run each type of foam through the densifier separately.

COVID-19 safety measures will be practiced throughout the recycling process. Residents dropping off foam will be encouraged to wear masks and gloves and remain at least 6 feet from other people near recycling bins. Tiny House staff and volunteers will follow COVID-19 procedures when handling foam products both outside and inside their facilities.

End Market Plan

Densified foam 'ingots' will be sold to manufacturers of household and construction products. At this point, while the project does not have formal purchase agreements, our partnership considers Princeton Molding in NJ the most probable buyer. Contacts at FoamCycle.com who consulted with us on this project indicate that Princeton Molding, A Better Frame and others are paying \$400-600 per ton. Princeton is seeking additional ingot suppliers to meet demand for their products.

Net proceeds from the sale of densified foam will be devoted to Tiny House projects. As the foam recycling program unfolds, our team will explore North Carolina-based manufacturers positioned to process foam into molding, frames, baseboards, insulation and other products.

Measurement Plan

Foam left at the proposed drop-off site at Tiny House (see photo right) will be weighed as it is brought inside to be densified, with separate calculations for lower-value food trays and containers and for higher-value packaging products. Ingot will be weighed as pallets are prepared for shipping.



In the first year of operations, it is projected that an average of one thousand pounds will be processed per month. Pallets of 'ingots' will be shipped to Princeton Molding every six months, using Coyote's less-than-truckload (LTL) network. Each pallet weighs 800-1000 pounds. With COVID-19 concerns causing many congregations to close their buildings, it is uncertain when congregation-based foam recycling will resume. Recent experience at First Presbyterian Church and New Garden Friends Meeting has shown expanded interest in recycling foam products as more people have turned to food delivery and take-out meals during the pandemic.

Outreach

In the initial start-up phase, partners will promote the drop-off location through their extensive email lists and social media outlets. Environmental Stewardship Greensboro will inform members of its 25+ affiliated faith congregations about the drop-off bins. At least one congregation will continue accepting foam products in bins on the church campus with volunteers delivering to Tiny House Greensboro. Additionally, partners will reach out to universities, pharmacies and hospitals that use large amounts of foam shipping coolers.

City of Greensboro staff, primarily through the Field Operations Department, will expand the outreach to inform all city residents about the opportunity to drop-off foam products through their print and on-line media, Gso Collects app, and their education programs.

Oversight and Governance

The day-to-day operations of the drop-off site will be managed by staff members and trained volunteers of Tiny House Community Development, Inc. During the term of the grant contract with the Foam Recycling Coalition, the project will be coordinated by Bill McNeil, ESG convener.



Proposed location of densifier in Tiny House warehouse

The Foam recycling program will have a steering committee to assist with the oversight of the foam recycling program with representatives from Greensboro Beautiful, ESG, THCD and Emerging Ecology. The Executive Director for THCD and a member of the Board of Directors will be the designated representatives from THCD, Inc. City of Greensboro staff may also have an ex-officio seat on the steering team.

While the Foam Recycling Coalition grant contract is with Tiny House Community Development, Inc., the organizing partners will formalize roles, responsibilities, and decision-making, and other governance matters in a memorandum of understanding.

Implementation Timeline

3rd Quarter 2020:

- Confirm partnership relationships and responsibilities with a Memorandum of Understanding
- Confirm publicity plans with City of Greensboro Field Operations staff
- Raise matching funds from partners, congregation members, and local allies via Emerging Ecology website
- Assuming all funding is committed by the end the third quarter 2020, order densifier and recycling bins

4th Quarter 2020:

- Receive and install equipment in Tiny House warehouse (October-November)
- Arrange for training Tiny House staff and volunteers (November)
- Circulate promotional material to congregations to drop-off foam material for a test run of the equipment (early November)
- Promote drop-off to known foam sources (i.e. hospitals, pharmacies, medical practices, congregations, universities) for a 'soft opening' in late November
- Receive and process initial material (late November-December)
- Formalize agreements with Princeton Molding and other purchasers
- Evaluate initial weeks of operation and adjust
- Finalize marketing plans with City Field Operations staff
- Initiate marketing and outreach plans

1st Quarter 2021

- Open the drop-off site to the wider public.
- Market drop-off location through City media and outreach
- File report with Foam Recycling Coalition
- Promote at spring recycling fairs, downtown and community events
- Assess methods of shipping ingots as a partial load (LTL)

Budget

USES

Densifier	RecycleTech XT200-E	\$38,500.00
Recycle Collection bins	2@\$1,650 + shipping	\$3,915.00
Electrical work at Tiny House Center		\$500.00
Marketing materials		\$400.00
Bank Charges & Fundraising		\$185.00
Signage		<u>\$600.00</u>
	Total	\$44,100.00

SOURCES

Foam Recycling Coalition	\$22,000.00	
Environmental Stewardship Greensboro	\$685.00	
Private contributions	\$3,415.00	
Greensboro Beautiful	<u>\$18,000.00</u>	
	Total	\$44,100.00

Any private contributions that exceed the budgeted amount will be devoted to unanticipated start-up costs and operating contingencies.

Individuals and organizations interested in making financial contributions toward the costs of launching Greensboro's Styrofoam Recycling Program are encouraged to use the Donate button at www.EmergingEcology.org/NoFoam. From your cell phone, use the QR code at the right.



Checks made payable to Emerging Ecology may be sent to 5911 Western Trail, Greensboro, NC 27410.

For additional information about this project, contact Bill McNeil at mcneilplanning@gmail.com.

Appendix 1: Workforce Development

The Foam Recycling Program will provide training opportunities for Tiny House associates who are experiencing homelessness. Most individuals experiencing or at risk of homelessness want to work and a growing number of service providers and employers have taken notice. Although choosing the right employment training program can seem like a daunting task, research and wisdom from the field shows that adult training programs have proven effective or promising in attaching the most disadvantaged jobseekers to work and helping them advance to employment options that meet their long-term needs and interests. Additionally, these training programs can be helpful in building upon existing skills or developing new skills necessary to enter and succeed in employment today.

THCD will use the revenue generated from the sale of foam to hire and train homeless and formerly homeless individuals. By creating part time employment opportunities to train individuals in the recycling operation they will also have access to case management to help with things like creating a resume, signing up for additional service like bus passes and Rapid Rehousing along with additional services, while work part time they can earn a wage to help with the cost of living. The program will be measured, and the trainee will only be able to work a pre-determined number of weeks to allow for THCD to help multiple individuals throughout the year. The Trainee will be assigned to work either a 3 hr. or 4hr. shift per day for 5 days and the program will be for a maximum of 12 weeks.